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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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EXAMINER	
RAMPURIA, SHARAD K	
ART UNIT	**PAPER NUMBER**
2617	

MAIL DATE	DELIVERY MODE
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/815,717	PERIYALWAR ET AL.	
	Examiner	Art Unit	
	Sharad Rampuria	2617	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *21 February 2007*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-17,19-28 and 30-34* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-17,19-28 and 30-34* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

I. The Art Unit location of this application in the USPTO has changed. To aid in correlating any papers for this application, all further correspondence regarding this application should be directed to Art Unit 2617.

Disposition of the claims

II. The current office-action is in response to the Amendment - After Non-Final Rejection filed on 02/21/2007.

Accordingly, Claims 18, 29, are cancelled, thus, Claims 1-17, 19-28, 30-34 are pending for further examination as follows:

Claim Rejections - 35 USC § 103

III. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later

invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

Claims 1-8, 10-17, 25-28, 30-32 & 34 are rejected under 35 U.S.C. 103(a) as being unpatentable over Stanforth (US 20020058502) and Haller et al. (US 7016648) further in view of Lietsalmi et al. (US 6522877).

As per claim 1, Stanforth teaches:

A mobile station adapted to participate in wireless PMP (point-to-point) communications (e.g. ad-hoc system for cellular communication system; Paragraphs 0013, Abstract)

Stanforth doesn't teaches expressly, the mobile station being further adapted to participate in wireless P2P (peer-to-peer) communications by communicating directly with another mobile station using signals in form similar to the cellular communications signals and using said cellular spectral resource, wherein, the cellular communications signals are CDMA (code division multiple access) signals or OFDM (orthogonal frequency division multiplexing) signals. However, Haller teaches in an analogous art, that the mobile station being further adapted to participate in wireless P2P (peer-to-peer) communications by communicating directly with another mobile station using signals in form similar to the cellular communications signals and using said cellular spectral resource, wherein, the cellular communications signals are CDMA (code division multiple access) signals or OFDM (orthogonal frequency division multiplexing) signals. (e.g. CDMA; Col.4; 47-Col.5; 8, Abstract). Therefore, it would have been obvious to one of ordinary skill in the art at the time of invention to modify Stanforth including

the mobile station being further adapted to participate in wireless P2P (peer-to-peer) communications by communicating directly with another mobile station using signals in form similar to the cellular communications signals and using said cellular spectral resource, wherein, the cellular communications signals are CDMA (code division multiple access) signals or OFDM (orthogonal frequency division multiplexing) signals in order to provide a method and system for communication between two device in a short distance wireless network.

The above combination doesn't teach expressly, communicating directly with a cellular base station using cellular communications signals transmitted on a cellular spectral resource. However, Lietsalmi teaches in an analogous art, that communicating directly with a cellular base station using cellular communications signals transmitted on a cellular spectral resource, (e.g. using base station; Col.4; 21-31, Col.7; 9-25). Therefore, it would have been obvious to one of ordinary skill in the art at the time of invention including communicating directly with a cellular base station using cellular communications signals transmitted on a cellular spectral resource in order to operating a cellular communications system of a type that comprises a Base Station/Mobile Switching Center/Interworking function (BMI) and a plurality of mobile stations. The method includes the steps of transmitting a point-to-multipoint message from the BMI to the plurality of mobile stations; and, in at least some of the plurality of mobile stations, receiving the point-to-multipoint message and transmitting an acknowledgement to the BMI using a point-to-point message. (Col.3; 18-27)

As per claims 2, 31, Stanforth teaches:

A mobile station according to claims 1, 30, wherein said cellular spectral resource comprises a downlink PMP band, and an uplink PMP band, wherein the mobile station is adapted to participate in wireless PMP (point to multi-point) communications using the downlink PMP band for receiving and using the uplink PMP band for transmitting, the mobile station being further adapted to participate in wireless P2P (peer-to-peer) communications using the PMP uplink band for both transmitting and receiving in a TDD (time division duplex) manner. (e.g. TDD; Paragraphs 0002, 0004, 0009, Abstract).

As per claim 3, Stanforth teaches:

As per claims 3-6, Stanforth teaches a mobile station according to claim 2 comprising: a transmitter for transmitting PMP communications and P2P communications on the uplink PMP band; a first receiver for receiving PMP communications on the downlink PMP band; a second receiver for receiving P2P communications on the uplink PMP band. (e.g. using within a cellular system; Paragraphs 0038, 0041, 0044)

As per claim 7, Stanforth teaches:

A mobile station according to claim 5 wherein said receiver is a software defined receiver. (12; Fig. 3a, 0038, 0050)

As per claims 8, 9-12, 15-16, Stanforth teaches:

A mobile station according to claim 1 further adapted to maintain linked state transitions between states for PMP communications and at least one state for P2P communications. (e.g.

using within a cellular system; Paragraphs 0038, 0041, 0044)

As per claim 13, Stanforth teaches:

A mobile station according to claim 12 adapted to coordinate the setup of a P2P communications link with another mobile station by: in response to a user selection, transmitting an P2P request to the another mobile station on a P2P access channel; receiving an acknowledgement from the another mobile station. (e.g. using within a cellular system; Paragraphs 0038, 0041, 0044)

As per claim 14, Stanforth teaches:

A mobile station according to claim 1 adapted to transmit a frame format which includes a time slot for PMP communications and a time slot for P2P communications. (TDD; Paragraphs 0002, 0004, 0009, Abstract)

As per claims 17, 32-34, Stanforth teaches:

A mobile station according to claims 16, 31, adapted to: receive a direction from the network to enter P2P communications with another mobile station; in response to said direction, coordinate set up of P2P communications with the another mobile station; while in P2P communications, listen to PMP transmissions from the network for maintenance purposes. (e.g. using within a cellular system; Paragraphs 0038, 0041, 0044)

As per claims 21-23 Stanforth teaches a mobile station according to claim 1 further adapted to perform at least one of rate control and power control for P2P communications in cooperation with the other mobile station. (e.g. power control; Paragraphs 0002, 0004, 0009, Abstract)

Claims 25-26, 30, are the **system, method** claims corresponding to **apparatus** claim 1 respectively, and rejected under the same rational set forth in connection with the rejection of claim 1 respectively, above.

As per claim 27, Stanforth teaches:

A cellular network according to claim 26 wherein the at least one network element comprises a base station transceiver which determines a pair of mobile stations which are communicating with each other are sufficiently close together for P2P communications due to their being located in a coverage area serviced by the base station transceiver. (e.g. using within a cellular system; Paragraphs 0038, 0041, 0044)

As per claim 28, Stanforth teaches:

A cellular network according to claim 26 wherein the at least one network element comprises a base station controller and a plurality of base stations which determine a pair of mobile stations which are communicating with each other are sufficiently close together for P2P communications due to their being located in a coverage area of base stations serviced by the base station controller. (e.g. using within a cellular system; Paragraphs 0038, 0041, 0044)

Claims 9 & 33 are rejected under 35 U.S.C. 103(a) as being unpatentable over Stanforth and Haller further in view of Raffel et al. [US 20030050090].

As per claim 9, the above combination teaches all the particulars of the claim except the states for PMP communications comprise dormant, standby and active. However, Raffel teaches in an analogous art, that a mobile station according to claim 8 wherein the states for PMP communications comprise dormant, standby and active, and wherein P2P communications are permitted when the mobile station is in one of the PMP states dormant and standby. (Pg.8; 0065) Therefore, it would have been obvious to one of ordinary skill in the art at the time of invention to modify Stanforth including the states for PMP communications comprise dormant, standby and active in order to provide a multiple mode for a mobile device.

As per claim 33, the above combination teaches all the particulars of the claim except maintaining linked state transitions between states for PMP communications and at least one state for P2P communications. However, Raffel teaches in an analogous art, that a method according to claim 31 further comprising: maintaining linked state transitions between states for PMP communications and at least one state for P2P communications. (Pg.8; 0065) Therefore, it would have been obvious to one of ordinary skill in the art at the time of invention to modify Stanforth including maintaining linked state transitions between states for PMP communications and at least one state for P2P communications in order to provide a multiple mode for a mobile device.

Claims 19-20 & 24 are rejected under 35 U.S.C. 103(a) as being unpatentable over Stanforth and Haller further in view of Karr et al. (US 20040102215).

As per claims 19-20, the above combination teaches all the particulars of the claim except to perform signaling to set up P2P communications with another mobile station using an access channel having a defined long code mask announced by a network controlling said spectral resource. However, Karr teaches in an analogous art, that a mobile station according to claim 1 further adapted to perform signaling to set up P2P communications with another mobile station using an access channel having a defined long code mask announced by a network controlling said spectral resource. (Pg.6; 0066) Therefore, it would have been obvious to one of ordinary skill in the art at the time of invention to modify Stanforth including to perform signaling to set up P2P communications with another mobile station using an access channel having a defined long code mask announced by a network controlling said spectral resource in order to provide system and apparatus for performing broadcast and localcast communications.

As per claim 24, the above combination teaches all the particulars of the claim except a mobile station according to claim 1 further comprising at least one steerable antenna which is steered for use in P2P communication or PMP communications. However, Karr teaches in an analogous art, that a mobile station according to claim 1 further comprising at least one steerable antenna which is steered for use in P2P communication or PMP communications. (Pg.3; 0032)

Response to Arguments

IV. Applicant's arguments with respect to claims 1-17, 19-28, 30-34 has been fully considered but is moot in view of the new ground(s) of rejection.

Conclusion

V. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Sharad Rampuria whose telephone number is (571) 272-7870. The examiner can normally be reached on M-F. (8:30-5 EST).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, George Eng can be reached on (571) 272-7495. The fax phone number for the organization where this application or proceeding is assigned is (571) 273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://portal.uspto.gov/external/portal/pair. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free) or *EBC@uspto.gov*.

Sharad Rampuria
Patent Examiner
Art Unit 2617.